0001

NORTH DAKOTA STATE DEPARTMENT OF HEALTH
Air Pollution Control Program
1200 Missouri Avenue
Bismarck, North Dakota 58505

ANNUAL EMISSION INVENTORY REPORT
FORM AP 301
FUEL BURNING EQUIPMENT USED FOR INDIRECT HEATING
Calendar Year 1977

1. Name of Firm or Organization: Minnkota Power Cooperative, Inc.

2. Plant Location: Center, North Dakota

3. Permit to Operate Number: F 76009

4. Source Unit Number (from Permit to Operate): 1

5. Type and Quantity of Fuel Used:

	PRIMARY FUEL	STANDBY FUEL
	Type Lignite Quantity per year 1,527,511 tons (Specify Units) Delivered Cost of fuel 3.15/ton ($/Unit Quantity)	Type No. 2 Oil Quantity per year 599,720 gal. (Specify Units) Delivered Cost of fuel .3796/gal. ($/Unit Quantity)
PERCENT ASH (Solid Fuel Only) Max. Min. Avg.	 10.02 7.15 8.99	
PERCENT SULFUR Max. Min. Avg.	 .84 .44 .63	 .3%
BTU PER UNIT Max. Min. Avg.	 6994 5961 6478	 140,000

9. Stack Emissions:

POLLUTANT	QUANTITY POUNDS PER HOUR (AVERAGE)	TONS PER YEAR
Particulate		
Sulfur Dioxide		
Nitrogen Oxides		
Other (Specify)		

Basis For Quantities Listed Above:

See Back of Form

10. Name of Person Submitting Report (Print or Type) Gary G. Kapity

Title Environmental Engineer Phone 701-795-4240

I declare under the penalties of perjury that this report has been examined by me and to the best of my knowledge and belief is a true, correct, and complete report.

(Signed) Gary G. Kapity Date 2-16-78

Particulates:

378,220#/Hr. Coal Avg.
2.5% of total coal calculated to be fly ash emissions
99% assumed efficiency of Electrostatic Precipitator (recent actual tests show efficiency to be 99.6%)

Calculations:

378,220 x .025 = 9,455.5 x 99% =
94.555#/Hr. Emissions

$$\frac{94.555}{2483.77 \text{ MBTU}} = .038\#/\text{MBTU}$$

SO_2:

Avg. S. content of total coal x 2
.64% Avg.

Calculations:

.0064 x 378,220 x 2 = 4841.2 x hrs. run in '75 (7773.41) ÷ 2000 = 18,816.4 tons/ year

NO_x:

700 ppm used from previous tests
assumed to be accurate. Based upon 2.2M# of exhaust gas/hr. maximum.